

Amendment to the Claims:

The claims under examination in this application, including their current status and changes made in this paper, are respectfully presented.

Claims 1 through 4 are canceled.

5 (currently amended). A method of performing real-time analysis of a target DSP chip, said target DSP chip operating in conjunction with a host computer, the method comprising:

storing, on the host computer, instructions for interpreting and processing statistics to be monitored;

operating the target DSP chip according to an application program;

accumulating, in at least one counter at the target DSP, a count of occurrences of at least one object corresponding to the capturing, without any further processing, statistics regarding data to be monitored at the target DSP during the operating step; and

transferring the contents of the at least one counter statistics to the host; and

processing and interpreting the statistics at the host responsive to the contents of the at least one counter.

6 (currently amended). ~~A The method of ascertaining wait times in a real-time system on a target DSP chip, said method comprising: claim 5, wherein the maintaining, on the target DSP chip, statistics based upon~~ correspond to wait times for numerous real-time tasks in the application program, without storing or transmitting the wait time each time a real-time task executes; and further comprising:

utilizing said statistics at a the host to ascertain if whether said system is properly performing in real-time.

7 (currently amended). A ~~The method of performing real-time analysis in a computer system, said computer system comprising a host computer and a target DSP computer, said method~~ claim 5, further comprising:

ascertaining, at said host computer, parameters of an the application program;  
and

~~in response to said step of ascertaining, automatically reconfiguring the ascertained parameters, defining operating parameters of for said target DSP computer so that to minimize time and space intrusion caused by from real-time analysis of said target DSP; and is minimized~~

configuring an operating system of the target DSP responsive to the defined operating parameters.

8 (currently amended). A method of performing real-time analysis in a computer system, said computer system comprising a host and a target DSP, said method comprising:

inputting, via a graphical user interface, information regarding an application program; ~~and~~

~~configuring, in response to said step of inputting, an operating system of said target DSP responsive to the information;~~

operating the target DSP to execute the application program;

accumulating, at the target DSP, at least one count of occurrences of an object during the operating step;

communicating the at least one count of occurrences to the host; and

operating the host to capture analyze the operation of real-time analysis data during execution of said applications program on said target DSP with minimal intrusion of time and space on said target responsive to the communicated at least one count.

9 (currently amended). A ~~The method of obtaining real-time analysis data relating to a target DSP, said target DSP being arranged to communicate with a host computer, said method comprising~~ claim 8, wherein the accumulating step comprises:

maintaining at the target DSP a count, a sum and a maximum value related to a parameter corresponding to the object;

and wherein the communicating step communicates utilizing said count, sum and maximum value to perform real-time analysis on the host.

10 (currently amended). The method of claim 9 wherein said parameter step of operating the target DSP comprises:

counting down a counter from an initial value past an interrupt value;  
responsive to the counter reaching the interrupt value, issuing an interrupt;  
responsive to the interrupt, adding the contents of the counter to the contents of a sum register;  
responsive to the interrupt, incrementing an interrupt counter; and  
responsive to the interrupt, and responsive to the contents of the counter exceeding the contents of a maximum register, replacing the contents of the maximum register with the contents of the counter;

wherein the communicating step comprises communicating the contents of the sum register, the interrupt counter, and the maximum register to the host, so that the host can analyze is-interrupt latency.

11 (currently amended). The method of claim 9 wherein said parameter step of operating the target DSP comprises:

initializing a previous time value in a first register;  
advancing a first counter from the previous time value in response to an event;  
then determining a difference between the contents of the first counter and the contents of the first register;  
storing the difference in a delta register;  
incrementing a second counter;  
responsive to the difference exceeding the contents of a maximum register, replacing the contents of the maximum register with the difference;  
storing the contents of the first counter in the first register; and  
repeating the advancing, determining, storing, incrementing, replacing, and storing steps;

wherein the communicating step comprises communicating the contents of the delta register, the second counter, and the maximum register, to the host, so that the host can analyze is-CPU load.

12 (currently amended). The method of claim 9 10 wherein said parameter step of operating the target DSP comprises:

responsive to servicing the interrupt, negating the contents of the counter;

determining a jitter time corresponding to the initial value plus the negated contents;

adding the jitter time to the contents of a jitter sum register;

responsive to the jitter time exceeding the contents of a maximum jitter time register, replacing the contents of the maximum jitter time register with the jitter time; and

incrementing a jitter counter; and

wherein the communicating step comprises communicating the contents of the jitter sum register, the jitter counter, and the maximum jitter time register to the host, so that the host can analyze is interrupt jitter.

13 (original). The method of claim 9 wherein said parameter is number of times a thread is executed.

14 (original). The method of claim 9 wherein said parameter is wait time.

15 (original). The method of claim 9 wherein said parameter is amount of data through a data stream.

16 (canceled).

17 (canceled).

18 (currently amended). The method of claim 5 17 wherein said statistics include a count, a maximum, and a sum.

Claims 19 through 21 are canceled.

22 (currently amended). The method of claim 9 wherein said ~~parameter~~ step of operating the target DSP comprises:

initializing a previous time value in a first register;

advancing a first counter from the previous time value in response to an event;

then determining a difference between the contents of the first counter and the contents of the first register;

storing the difference in a delta register;

responsive to the difference exceeding the contents of a maximum register, replacing the contents of the maximum register with the difference;

storing the contents of the first counter in the first register; and

repeating the advancing, determining, storing, replacing, and storing steps;

wherein the communicating step comprises communicating the contents of the maximum register to the host, so that the host can analyze is maximum CPU busy period.

Claims 23 through 25 are canceled.